

Sony Broadcast BVU 200 P/S

U-MATIC EDITING VIDEOCASSETTE RECORDER

BVE 500 ACE

AUTOMATIC EDITING CONTROL UNIT

U-matic

CAPTURING THE LIVING IMAGE...



Sony Broadcast Equipment... Flexibility in System Design

The BVU-200 P/S U-matic videocassette recorder and BVE-500 ACE Automatic Editing Control Unit are just two component parts of Sony Broadcast's complete, integrated, U-matic system.

For matchless picture quality, the BVP-300 three tube camera. Automatic operation of iris, white and black balance and beam current optimisation gives the ultimate in picture quality, even under the most arduous conditions. Unique Sony pre-amp FET's give outstanding low-light performance.

And for less critical applications — the BVP-200 two tube camera — 2/3" Saticon for luminance, 1" MF Trinitron for chrominance channel. Versatile, easy-to-operate. Lighter weight, lower power consumption than any



BVP-300 three tube camera. BVP-200 two tube camera.
BVT-500 P/S
digital time base corrector. BVU-100 P/S portable
U-matic recorder.

previous broadcast quality camera. Like the BVP-300, self-contained — no backpack required.

The BVU-100 P/S Portable U-matic videocassette recorder designed for ENG and editing applications to complement the BVU-200 P/S editing recorder. Broadcast quality recordings in a highly mobile, easily operated, self-contained 12.2 kg package.

Time Base Corrector BVT-500 P/S. Separate processing of luminance and chrominance signals for the highest quality replay from the BVU 200 P/S. Chroma noise reduction, control of luminance/ chrominance delay, differential gain correction and digital drop-out compensation, in colour, are all included in this compact, low cost package. A wider window option is also available.

The BVT-500 P/S will give locked colour pictures at up to twice normal play speed and will transcode between regular and high-band U-matic formats.

Sony Broadcast U-matic

The Preferred Cassette Format

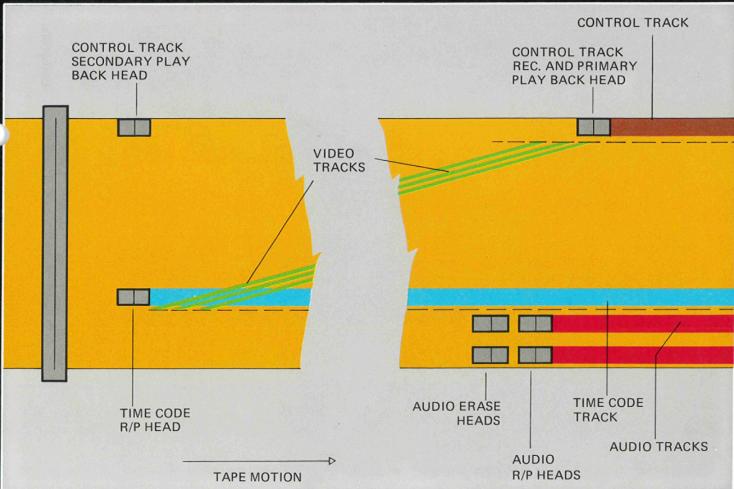
Sony Broadcast's unique tape format and optimum high band recording parameters combine to give superb picture quality.

Precision production engineering allows a combination of wide video track and narrow guard band for improved signal/noise characteristics — but still with full tape interchangeability between machines. EBU time-code track and two discrete audio tracks give maximum operational flexibility.

A high-band U-matic head drum assembly.



The Sony Broadcast U-matic format



The world's finest technology at your fingertips

BVU 200 P/S

U-MATIC EDITING VIDEOTRACK RECORDER

Operational Features

Video

The recorder accepts a composite lv p-p ($\pm 6\text{dB}$) video signal. BVU-200P machines operate on the 625-line PAL system, BVU-200S machines are for 625-line SECAM operation. Control of video level can be either manual or by an AGC system measuring sync amplitude. Luminance is recorded on an FM sub-carrier, chrominance information is recorded as a 'colour under' signal. The capstan servo system can be locked either to the input signal or to an external sync input. In the absence of either, the servo locks to an internal crystal controlled reference. Indicator lamps show the status of capstan, framing and head drum servos.

A separate input can accept sub-carrier from an external Time Base Corrector.

An internal dual delay line drop-out compensator operates at both FM sub-carrier frequency and at baseband video. A separate RF output connector is provided for external drop-out compensation.

Dubbing

Input and output dubbing connectors allow the transfer of separate luminance and chrominance signals between machines during dubbing or editing. This avoids repeatedly combining and separating these signals and even third generation tapes can be of broadcast quality with this Sony Broadcast feature.

Editing

As a stand alone unit, the BVU-200 P/S can perform insert and assemble edits in video and/or audio, with servos controlling capstan, head drum and framing for smooth disturbance free editing. Combined with the BVE-500 ACE Editing Control Unit, these facilities are greatly expanded. The BIDIREX tape control system gives rapid edit point location and editing decisions are implemented by a single operation, enabling a professional end product to be made with a minimum of operator training.

Audio and Time Code

Two discrete programme audio tracks are provided, with input sensitivity switchable between mic. and line level. Recording level is controlled manually and audio limiters may be switched in. A line level output is provided for each audio track, together with a selectable monitoring output and headphone jack.

A third track permits the recording and playback of EBU time code. Input and output levels are 0dBu, unbalanced.



The BVR 510 ACE control unit provides remote operation of the tape transport functions of the BVU 200 P/S. The Bidirex search facility enables a recording to be monitored from still frame to twice normal play speed in forward or reverse. The unit also provides a pre-roll facility and tape timer.



Sony Broadcast BR series, low drop out Videocassettes are recommended for use with BVU 200 P/S U-matic recorders. KCS Videocassettes are available with play times of 10 and 20 mins. and KCA types with play times of 10, 20, 30 and 60 mins.



BVU-200 P/S tape transport controls are fully interlocked and operating modes may be selected in any sequence.

BVE 500 ACE

AUTOMATIC EDITING CONTROL UNIT

The BVE-500 ACE provides complete functional control of two BVU-200 P/S U-matic machines, one operating in playback and one in record mode.

Operational Features

Edit Point Search

BIDIREX tape control knobs for both playback and record machines allow tape speed to be varied from still frame to twice normal speed in either direction during edit point search. A locked picture is available at all times for monitoring.

Tape Counters

Tape counters for playback and record machines count control track pluses and display tape position to within one frame.

Edit Functions

The BVE-500 ACE permits insert and assemble edits to be made either automatically or manually. Video, audio track 1 and track 2 may be edited separately, or simultaneously in the insert mode.

Automatic Editing

After edit 'in' and 'out' points have been decided and entered into the BVE-500 ACE's three registers, editing is carried out automatically, with the unit pre-rolling both machines and then initiating video and audio switching. After an edit has been performed, the record machine automatically returns to the edit 'out' point as this is its next 'in' point. Only the playback machine then needs to be searched for the next edit point.

Edits may be rehearsed with a preview facility and the edit point shifted in increments of one frame. After completion, an edit may be checked with the review facility.

Cue Tone Operation

Optional recording of 1 sec. tone bursts on either of the audio tracks permits automatic tape cueing and can also be used to operate external equipment.

Functional Indicator Lights

The status of editing functions is shown by indicator lights — generally these are arranged to flash until the required instruction has been entered, then become permanently lit as each command is made.

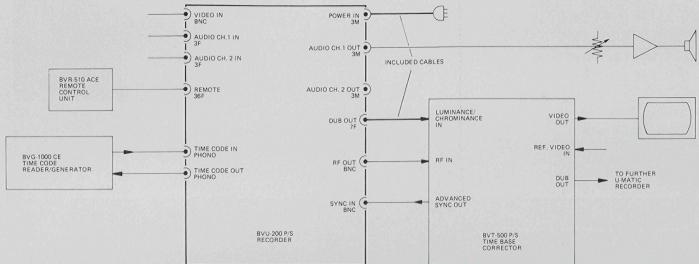


BVE-500 ACE control panel. Centre panel controls provide selection of edit mode and give access to record and playback edit point registers.

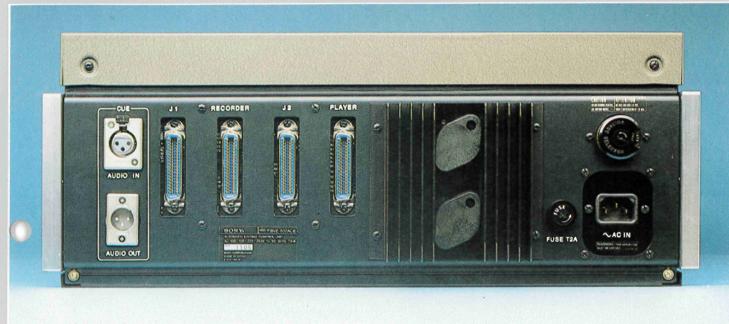
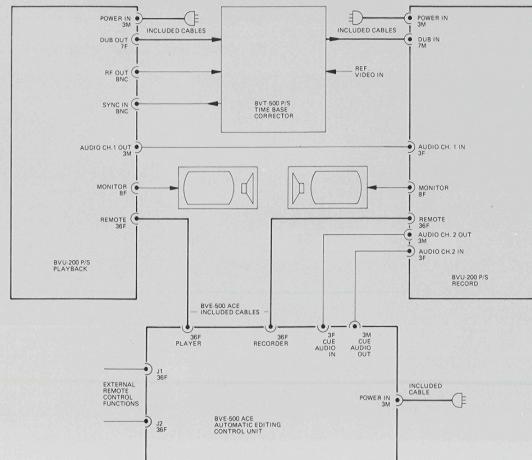
Connections

TYPICAL SYSTEM CONFIGURATIONS

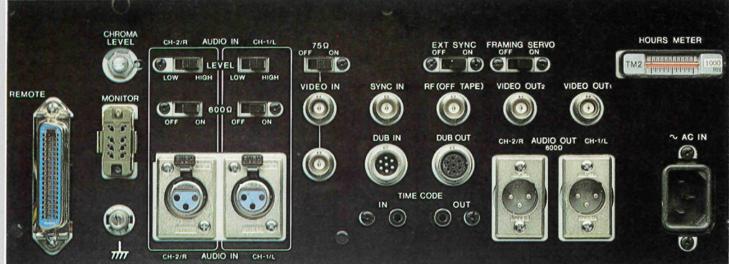
RECORDING AND REPLAY WITH BVT 500 P/S TIME BASE CORRECTOR



TAPE TO TAPE EDITING USING RF DUBBING FACILITY THROUGH BVT-500 P/S TIME BASE CORRECTOR



BVE-500 ACE rear connector panel.



BVU-200 P/S rear connector panel.

Performance Data and Specification

BVU 200 P/S

VIDEO

Recording System 2-head helical scan, tape speed 9.53 cm/sec (3.75 in/sec)
Luminance FM 4.8-6.4 MHz
Chrominance converted SC
BVU 200P (PAL) 923-803 kHz
BVU 200S (SECAM) D, 837-891 kHz
D', 994-141 kHz

Video input Composite video, 1.0V p-p, \pm 6dB, 75 ohms
Video outputs Composite video, 1.0V p-p, \pm 0.2V, 75 ohms
Ext. sync input Composite video, 1.0V p-p, 75 ohms
RF output (off tape) 2V p-p, negative, or 1V comp video, 75 ohms
SC input 0.5V p-p, 75 ohms
Dubbing input 1V p-p, 75 ohms
Dubbing output Luminance, 0.5V p-p, 75 ohms
Chrominance 0.5V p-p, 75 ohms
Resolution Luminance, 0.5V p-p, 75 ohms
Chrominance 0.5V p-p, 75 ohms
Monochrome, 370 lines
Colour, 260 lines

Signal-to-noise ratio 46dB (colour)

AUDIO

Frequency response 50 - 15,000 Hz
Signal-to-noise ratio 48dB (at 3% dist)
Distortion Less than 2.5%
Wow and flutter 0.2% rms
Inputs Mic level: -60dBu, 3K ohms, balanced.
Line level: +4dBu, 600/10K ohms, balanced.
+4dBu, balanced, into 600 ohm load
-26dBu, 8 ohms

TIME CODE

Input 0dBu, 10K ohms, unbalanced
Output 0dBu, low impedance, unbalanced

ELECTRICAL

Power requirements 100/120/220/240V \pm 10%, 48-64 Hz
Power consumption 190W max

GENERAL

Operating temperature 5°C to 40°C
Recording time 60 mins max
Fast forward time Less than 5.2 mins with 60 min videocassette
Rewind time Less than 5.6 mins with 60 min videocassette
Recommended videocassettes Sony Broadcast KCA or KCS BR series

ACCESSORIES

Included Power cable
Dubbing cable VDC-3
Operation and maintenance manual
Remote control unit BVR-510 ACE
Spare parts kits
Type A RRU-200 PS-A
Type B RRU-200 PS-B
Type C RRU-200 PS-C
Combination BVU-200 and BVU-100 alignment kit

BVE 500 ACE

Cue tone frequency
Digital tape time counter capacity

1kHz from internal generator
- 79 min 59 sec 24 frames, through
00.00.00 to + 79 min 59 sec 24 frames.
 \pm 2 frames

Editing accuracy

5°C to 40°C

Power requirements

100/120/220/240V \pm 10%, 50/60 Hz
70W

BIDIREX tape speed selection

\times 2, \times 1, \times 1/5, \times 1/20 of normal speed
in forward and reverse.
TTL logic levels

External interface

ACCESSORIES

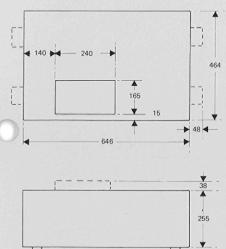
Included

Power cable
Two 5m remote control cables
Operation and maintenance manual
Rack mounting kit

Optional

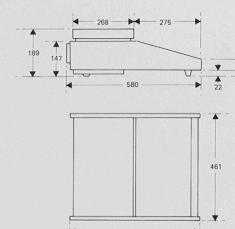
Dimensions

BVU 200 P/S



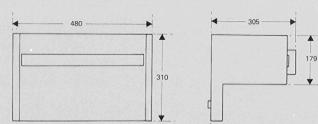
WEIGHT: 46 kg

BVE 500 ACE



WEIGHT: 16.5 kg

INSTALLATION WITH
OPTIONAL RACK MOUNTING KIT



All dimensions
are in mm

Sony Broadcast



CAPTURING THE LIVING IMAGE...



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